Amendments to the Specification

Please replace the paragraph beginning on page 6, line 2, with the following amended paragraph:

FIG. 1(1A-1C) shows BrdU staining and NeuroTag™ binding of primary neurons in culture. A. Primary neurons were labeled with BrdU for 1 day; and B. for 4 days. C. The neuronal nature of primary cells was determined by binding with tetanus toxin (NeuroTag™). Cell bodies and processes of all cells in culture were stained. Calibration bar = 20 μm.

Please replace the paragraph beginning on page 6, line 7, with the following amended paragraph:

FIG. 2(2A-2F) illustrates photomicrographs showing the morphological changes that occur during the culture and passaging of primary neurons. A. Primary cell culture after 4 days of plating in N2 + bFGF. B. Primary cells 4 days in culture after passage (passage 3). Cells were larger and interconnected by processes that also increased in size. Small proliferating cells were visible in the culture. C. Cells passaged (passage 3) and kept in culture for ~14 days in the presence of bFGF. Negative magnification 33X.

Please replace the paragraph beginning on page 6, line 14, with the following amended paragraph:

FIG. 3(3A-3D) shows transmission electron micrographs of primary neurons in culture. A. A pyramidal-shaped primary hippocampal neuron showing both the soma and processes, including a major apical process (arrow) and a finer caliber process (arrowhead). Bar=10 μm. B. Enlarged view of the neuronal soma shown in panel A. Bar=1 μm. C. A portion of the major apical process of the neuron shown in panel A. Bar=1 μm. D. Contact between two neuritic processes. Bar=0.1 μm.

Please replace the paragraph beginning on page 6, line 21, with the following amended paragraph:

FIG. 4(4A-4D) shows scanning electron micrographs of primary neurons in culture. A. Overview of primary hippocampal neurons in culture including well-differentiated pyramidal somata (arrow) with large processes containing multiple levels of branching and less-differentiated, rounded neurons with large, extended processes (arrowheads). Bar = 50 μm. B. A major apical dendrite emerging from a well-differentiated pyramidal neuron showing a smooth, regular caliber process just proximal to the first (major) bifurcation with several smaller processes, possibly axons emerging from it. The PORN/laminin coating the vessel surface can be seen as a porous carpeting which is absent in some patches. Bar = 2 μm. C. A well-differentiated neuron (in the middle of the field) possessing a large pyramidal soma (compare to FIGURE. 3A) and a large apical dendrite (arrowheads) contacted by a number of processes from other neurons. Other less-differentiated neurons which are fixed in the process of dividing were also present (arrows). Bar = 20 μm. D. Enlarged view of the dividing neuron in the upper field of view in panel C. Bar = 10 μm.

Please replace the paragraph beginning on page 42, line 17, with the following amended paragraph:

Forward (F) primer: 5'-GAGGAGATAACTGAGTACCG-3' (SEQ ID NO:1)

Please replace the paragraph beginning on page 42, line 18, with the following amended paragraph:

Reverse (R) primer: 5'-CCAAAGCCAATCCGACACTC-3' (SEQ ID NO:2)

Please replace the paragraph beginning on page 42, line 20, with the following amended paragraph:

F primer: 5'-ACCTCGGCACCCTGAGGCAG-3' (SEQ ID NO:3)

Please replace the paragraph beginning on page 42, line 21, with the following amended paragraph:

R primer: 5'-CCAGCGACTCAACCTTCCTC-3' (SEQ ID NO:4)